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RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/10/051,986

TIME: 19:06:47

Input Set : N:\Crf3\RULE60\10051986.txt

Output Set: N:\CRF3\02132002\J051986.raw

SEQUENCE LISTING

C--> 3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Hillman, Jennifer L.
 6 Tang, Y. Tom
 7 Lal, Preeti
 8 Guegler, Karl J.
 9 Corley, Neil C.
 10 Patterson, Chandra
 11 Batra, Sajeev
 12 Baughn, Mariah R.

ENTERED

C--> 14 (ii) TITLE OF INVENTION: RAS PROTEINS

16 (iii) NUMBER OF SEQUENCES: 14

18 (iv) CORRESPONDENCE ADDRESS:

19 (A) ADDRESSEE: INCYTE PHARMACEUTICALS, INC.
 20 (B) STREET: 3174 Porter Drive
 21 (C) CITY: Palo Alto
 22 (D) STATE: CA
 23 (E) COUNTRY: US
 24 (F) ZIP: 94304

26 (v) COMPUTER READABLE FORM:

27 (A) MEDIUM TYPE: Diskette
 28 (B) COMPUTER: IBM Compatible
 29 (C) OPERATING SYSTEM: DOS
 30 (D) SOFTWARE: Word Perfect 6.1/MS-DOS 6.2

C--> 37 (vi) CURRENT APPLICATION DATA:

C--> 38 (A) APPLICATION NUMBER: US/10/051,986

C--> 39 (B) FILING DATE: 15-Jan-2002

40 (C) CLASSIFICATION:

43 (vii) PRIOR APPLICATION DATA:

44 (A) APPLICATION NUMBER: 08/766,551
 45 (B) FILING DATE: DECEMBER 12, 1996

47 (viii) ATTORNEY/AGENT INFORMATION:

48 (A) NAME: Cerrone, Michael C.
 49 (B) REGISTRATION NUMBER: 39,132
 50 (C) REFERENCE/DOCKET NUMBER: PF-0168-1 CIP

52 (ix) TELECOMMUNICATION INFORMATION:

53 (A) TELEPHONE: 650-855-0555
 54 (B) TELEFAX: 650-845-4166
 55 (C) TELEX:

58 (2) INFORMATION FOR SEQ ID NO: 1:

60 (i) SEQUENCE CHARACTERISTICS:

61 (A) LENGTH: 259 amino acids
 62 (B) TYPE: amino acid

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63          (C) STRANDEDNESS: single
64          (D) TOPOLOGY: linear
66      (vii) IMMEDIATE SOURCE:
67          (A) LIBRARY: KIDNNOT05
68          (B) CLONE: 627565
70      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1 :
72 Met Asn Ile Leu Ala Pro Val Arg Arg Asp Arg Val Leu Ala Glu
73          5          10          15
74 Leu Pro Gln Cys Leu Arg Lys Glu Ala Ala Leu His Gly His Lys
75          20          25          30
76 Asp Phe His Pro Arg Val Thr Cys Ala Cys Gln Glu His Arg Thr
77          35          40          45
78 Gly Thr Val Gly Phe Lys Ile Ser Lys Val Ile Val Val Gly Asp
79          50          55          60
80 Leu Ser Val Gly Lys Thr Cys Leu Ile Asn Arg Phe Cys Lys Asp
81          65          70          75
82 Thr Phe Asp Lys Asn Tyr Lys Ala Thr Ile Gly Val Asp Phe Glu
83          80          85          90
84 Met Glu Arg Phe Glu Val Leu Gly Ile Pro Phe Ser Leu Gln Leu
85          95          100          105
86 Trp Asp Thr Ala Gly Gln Glu Arg Phe Lys Cys Ile Ala Ser Thr
87          110          115          120
88 Tyr Tyr Arg Gly Ala Gln Ala Ile Ile Ile Val Phe Asn Leu Asn
89          125          130          135
90 Asp Val Ala Ser Leu Glu His Thr Lys Gln Trp Leu Ala Asp Ala
91          140          145          150
92 Leu Lys Glu Asn Asp Pro Ser Ser Val Leu Leu Phe Leu Val Gly
93          155          160          165
94 Ser Lys Lys Asp Leu Ser Thr Pro Ala Gln Tyr Ala Leu Met Glu
95          170          175          180
96 Lys Asp Ala Leu Gln Val Ala Gln Glu Met Lys Ala Glu Tyr Trp
97          185          190          195
98 Ala Val Ser Ser Leu Thr Gly Glu Asn Val Arg Glu Phe Phe Phe
99          200          205          210
100 Arg Val Ala Ala Leu Thr Phe Glu Ala Asn Val Leu Ala Glu Leu
101          215          220          225
102 Glu Lys Ser Gly Ala Arg Arg Ile Gly Asp Val Val Arg Ile Asn
103          230          235          240
104 Ser Asp Asp Ser Asn Leu Tyr Leu Thr Ala Ser Lys Lys Lys Pro
105          245          250          255
106 Thr Cys Cys Pro
111 (2) INFORMATION FOR SEQ ID NO: 2:
113      (i) SEQUENCE CHARACTERISTICS:
114          (A) LENGTH: 196 amino acids
115          (B) TYPE: amino acid
116          (C) STRANDEDNESS: single
117          (D) TOPOLOGY: linear
119      (vii) IMMEDIATE SOURCE:
120          (A) LIBRARY: COLNNOT05

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PATENT APPLICATION: US/10/051,986

TIME: 19:06:47

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121      (B) CLONE: 775601
123      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2 :
125 Met Gly Ile Leu Phe Thr Arg Ile Trp Arg Leu Phe Asn His Gln
126              5              10              15
127 Gly Pro Arg Gly Ser Ser Gln Thr Asn Ala Ala Ala Met Ser Ala
128              20              25              30
129 Ser Leu Glu His Lys Val Ile Ile Val Gly Leu Asp Asn Ala Gly
130              35              40              45
131 Lys Thr Thr Ile Leu Tyr Gln Phe Ser Met Asn Glu Val Val His
132              50              55              60
133 Thr Ser Pro Thr Ile Gly Gly Asn Val Glu Glu Ile Ala Ile Asn
134              65              70              75
135 Asn Thr Arg Phe Leu Met Trp Asp Ile Gly Gly Gln Glu Ser Leu
136              80              85              90
137 Arg Ser Ser Trp Asn Thr Tyr Tyr Thr Asn Thr Glu Phe Val Ile
138              95              100             105
139 Val Val Val Asp Ser Thr Asp Arg Glu Arg Ile Ser Val Thr Arg
140             110             115             120
141 Glu Glu Leu Tyr Lys Met Leu Ala His Glu Asp Pro Arg Lys Ala
142             125             130             135
143 Gly Leu Leu Ile Phe Ala Asn Lys Gln Asp Val Lys Glu Cys Met
144             140             145             150
145 Thr Val Ala Glu Ile Ser Gln Phe Leu Lys Leu Thr Ser Ile Lys
146             155             160             165
147 Asp His Gln Trp His Ile Gln Ala Cys Cys Ala Leu Thr Gly Glu
148             170             175             180
149 Gly Leu Cys Gln Gly Leu Glu Trp Met Met Ser Arg Leu Lys Ile
150             185             190             195
151 Arg
156 (2) INFORMATION FOR SEQ ID NO: 3:
158      (i) SEQUENCE CHARACTERISTICS:
159          (A) LENGTH: 191 amino acids
160          (B) TYPE: amino acid
161          (C) STRANDEDNESS: single
162          (D) TOPOLOGY: linear
164      (vii) IMMEDIATE SOURCE:
165          (A) LIBRARY: UCMCL5T01
166          (B) CLONE: 1528559
168      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3 :
170 Met Leu Leu Gly Asp Thr Gly Val Gly Lys Thr Cys Phe Leu Ile
171              5              10              15
172 Gln Phe Lys Asp Gly Ala Phe Leu Ser Gly Thr Phe Ile Ala Thr
173              20              25              30
174 Val Gly Ile Asp Phe Arg Asn Lys Val Val Thr Val Asp Gly Val
175              35              40              45
176 Arg Val Lys Leu Gln Ile Trp Asp Thr Ala Gly Gln Glu Arg Phe
177              50              55              60
178 Arg Ser Val Thr His Ala Tyr Tyr Arg Asp Ala Gln Ala Leu Leu
179              65              70              75

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```

180 Leu Leu Tyr Asp Ile Thr Asn Lys Ser Ser Phe Asp Asn Ile Arg
181           80           85           90
182 Ala Trp Leu Thr Glu Ile His Glu Tyr Ala Gln Arg Asp Val Val
183           95          100          105
184 Ile Met Leu Leu Gly Asn Lys Ala Asp Met Ser Ser Glu Arg Val
185          110          115          120
186 Ile Arg Ser Glu Asp Gly Glu Thr Leu Ala Arg Glu Tyr Gly Val
187          125          130          135
188 Pro Phe Leu Glu Thr Ser Ala Lys Thr Gly Met Asn Val Glu Leu
189          140          145          150
190 Ala Phe Leu Ala Ile Ala Lys Glu Leu Lys Tyr Arg Ala Gly His
191          155          160          165
192 Gln Ala Asp Glu Pro Ser Phe Gln Ile Arg Asp Tyr Val Glu Ser
193          170          175          180
194 Gln Lys Lys Arg Ser Ser Cys Cys Ser Phe Met
195          185          190

```

200 (2) INFORMATION FOR SEQ ID NO: 4:

202 (i) SEQUENCE CHARACTERISTICS:

203 (A) LENGTH: 260 amino acids

204 (B) TYPE: amino acid

205 (C) STRANDEDNESS: single

206 (D) TOPOLOGY: linear

208 (vii) IMMEDIATE SOURCE:

209 (A) LIBRARY: PROSTUT08

210 (B) CLONE: 1651593

212 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4 :

```

214 Met Asn Ile Leu Ala Pro Val Arg Arg Asp Arg Val Leu Ala Glu
215           5           10           15
216 Leu Pro Gln Cys Leu Arg Lys Glu Ala Ala Leu His Gly His Lys
217          20          25          30
218 Asp Phe His Pro Arg Val Thr Cys Ala Cys Gln Glu His Arg Thr
219          35          40          45
220 Gly Thr Val Gly Arg Phe Lys Ile Ser Lys Val Ile Val Val Gly
221          50          55          60
222 Asp Leu Ser Val Gly Lys Thr Cys Leu Ile Asn Arg Phe Cys Lys
223          65          70          75
224 Asp Thr Phe Asp Lys Asn Tyr Lys Ala Thr Ile Gly Val Asp Phe
225          80          85          90
226 Glu Met Glu Arg Phe Glu Val Leu Gly Ile Pro Phe Ser Leu Gln
227          95          100          105
228 Leu Trp Asp Thr Ala Gly Gln Glu Arg Phe Lys Cys Ile Ala Ser
229          110          115          120
230 Thr Tyr Tyr Arg Gly Ala Gln Ala Ile Ile Ile Val Phe Asn Leu
231          125          130          135
232 Asn Asp Val Ala Ser Leu Glu His Thr Lys Gln Trp Leu Ala Asp
233          140          145          150
234 Ala Leu Lys Glu Asn Asp Pro Ser Ser Val Leu Leu Phe Leu Val
235          155          160          165
236 Gly Ser Lys Lys Asp Leu Ser Thr Pro Ala Gln Tyr Ala Leu Met

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/051,986

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TIME: 19:06:47

Input Set : N:\Crf3\RULE60\10051986.txt

Output Set: N:\CRF3\02132002\J051986.raw

```

237          170          175          180
238 Glu Lys Asp Ala Leu Gln Val Ala Gln Glu Met Lys Ala Glu Tyr
239          185          190          195
240 Trp Ala Val Ser Ser Leu Thr Gly Glu Asn Val Arg Glu Phe Phe
241          200          205          210
242 Phe Arg Val Ala Ala Leu Thr Phe Glu Ala Asn Val Leu Ala Glu
243          215          220          225
244 Leu Glu Lys Ser Gly Ala Arg Arg Ile Gly Asp Val Val Arg Ile
245          230          235          240
246 Asn Ser Asp Asp Ser Asn Leu Tyr Leu Thr Ala Ser Lys Lys Lys
247          245          250          255
248 Pro Thr Cys Cys Pro
249          260
254 (2) INFORMATION FOR SEQ ID NO: 5:
256   (i) SEQUENCE CHARACTERISTICS:
257       (A) LENGTH: 190 amino acids
258       (B) TYPE: amino acid
259       (C) STRANDEDNESS: single
260       (D) TOPOLOGY: linear
262   (vii) IMMEDIATE SOURCE:
263       (A) LIBRARY: BLADNOT05
264       (B) CLONE: 1673056
266   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5 :
268 Met Leu Pro Ile Phe Ile Ser Asn Trp Trp Leu Asp Met Leu Gly
269          5          10          15
270 Leu Val Trp Glu Pro Ser Asp Lys Leu Lys Gly Trp Ile Arg Lys
271          20          25          30
272 Arg Leu Thr Thr Pro Leu Val Ala Gly Gln Glu Asp Tyr Asp Arg
273          35          40          45
274 Leu Arg Thr Leu Ser Tyr Pro Gln Thr Val Gly Glu Thr Tyr Gly
275          50          55          60
276 Lys Asp Ile Thr Ser Arg Gly Lys Asp Met Pro Ile Ala Asp Val
277          65          70          75
278 Phe Leu Ile Cys Phe Ser Leu Val Ser Pro Ala Ser Phe Glu Asn
279          80          85          90
280 Val Arg Ala Lys Trp Tyr Pro Glu Val Arg His His Cys Pro Asn
281          95          100          105
282 Thr Pro Ile Ile Leu Val Gly Thr Lys Leu Asp Leu Arg Asp Asp
283          110          115          120
284 Lys Asp Thr Ile Glu Lys Leu Lys Glu Lys Lys Leu Thr Pro Ile
285          125          130          135
286 Thr Tyr Pro Gln Gly Leu Ala Met Ala Lys Glu Ile Gly Ala Val
287          140          145          150
288 Lys Tyr Leu Glu Cys Ser Ala Leu Thr Gln Arg Gly Leu Lys Thr
289          155          160          165
290 Val Phe Asp Glu Ala Ile Arg Ala Val Ile Cys Pro Pro Pro Val
291          170          175          180
292 Lys Lys Arg Lys Arg Lys Cys Leu Met Leu
293          185          190

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/051,986

DATE: 02/13/2002

TIME: 19:06:48

Input Set : N:\Crf3\RULE60\10051986.txt

Output Set: N:\CRF3\02132002\J051986.raw

L:3 M:220 C: Keyword misspelled or invalid format, [(1) GENERAL INFORMATION:]
L:14 M:220 C: Keyword misspelled or invalid format, [(ii) TITLE OF INVENTION:]
L:33 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:34 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:37 M:220 C: Keyword misspelled or invalid format, [(vi) CURRENT APPLICATION DATA:]
L:37 M:220 C: Keyword misspelled or invalid format, [(vi) CURRENT APPLICATION DATA:]
L:38 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:39 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]